

REMARKS

The Examiner's allowance of Claims 1, 2, 4-10, 20-33 and 49, and his indication of the allowability of Claims 35 and 36 if rewritten to include the limitations of their base claim are noted with appreciation.

Although allowed, independent Claims 1, 20, and 49, and dependent Claims 2 and 21, have been amended to better define the invention and to avoid possible ambiguity and problems due to misinterpretation of the claims in light of the specification, for the following reasons.

The present application is directed to protocol translation of packets on-the-fly to convert a packet formatted in accordance with a first protocol to a packet formatted in accordance with a second protocol, and the independent claims set out process steps for accomplishing this translating "without buffering". However, the storage switch linecard shown in Figure 7 and described in paragraph [0085] has buffers 712 associated with ingress and egress traffic managers 708 to the fabric. These buffers may have a role in forwarding ingress and egress packets in the switch as described in paragraph [0085], but have no role in the claimed protocol translation function that is performed "without buffering". Nevertheless, since the disclosure of buffers in the specification could lead to possible ambiguity in construing the claims, independent Claims 1, 20 and 49 (and several of the dependent claims) have been amended to limit the buffering to the protocol translating function.

Applicants wishes to call to the attention of the Examiner that this application is related to the series of concurrently filed applications cross-referenced in paragraph [0002] (pages 1-2) of the specification (which paragraph is amended herein to update the status of these applications). These applications and now-issued patents are directed to different inventive aspects of a storage switch, and all have substantially similar specifications. In addition, several of these applications (Serial No. 10/051,321; Serial No. 10/051,093; and Serial No. 10/051,396) and issued U.S. Pat. No. 7,185,062 have claims which, although directed to different inventions, have some similarities to the present claims in calling for certain actions to be performed “without buffering” or at “wire speed”, and these claims have been rejected on prior art and these rejections have been traversed. Further, in an Office Action dated May 2, 2007 in Serial No. 10/051,396, the Examiner rejected Claim 1 which was directed to virtualization of packets without buffering “in the switch” for lack of enablement under 35 U.S.C. §112, ¶1 based upon the disclosure of buffers 712 in the specification.

Therefore, to avoid any possible future ambiguities as to the scope of the present claims and any possible inconsistencies between the claims and the specification, a number of claims, including allowed claims, in this application have been amended to restrict the “without buffering” limitation to only the function of translating protocols. It is respectfully submitted that these amendments do not impact the allowability of the claims, and that these claims remain allowable over the prior art of record.

The Rejections Under 35 U.S.C. §102

Claim 34

The rejection of Claim 34 under 35 U.S.C. §102 as anticipated by U.S. Pat. No. 5,331,631 to Teraslinna is respectfully traversed. Claim 34 has been amended to delete the conditional “if necessary” statement as applied to the “translate” function on lines 14-15 of the claim which the Examiner interpreted as not satisfied. As amended, Claim 34 now recites unconditionally (in relevant part):

the egress linecard using the virtual target descriptor identifier to identify information about a physical target associated with the virtual target, including whether the physical target requires a packet formatted in accordance with a second protocol, and using the information about the physical target to convert a virtual target block address to a physical target block address and to translate the format of the packet from the first protocol to the second protocol

Teraslinna discloses a fault tolerant switch that performs address virtualization by using a translation table to convert logical (virtual) addresses to physical addresses (see col. 8, lines 22-34). Teraslinna does not disclose (or suggest) translating the format of a packet from a first protocol to a second protocol, as claimed. Accordingly, the reference cannot anticipate (or render obvious) Claim 34, and it is submitted that Claim 34 is also allowable.

Claims 35 and 36, which depend from Claim 34, have been amended to recite that the “egress linecard translates the format of the packet from the first protocol to the second protocol” either “without buffering the packet” (Claim 35) or “at wire speed” (Claim 36). These amendments are to avoid ambiguity and inconsistency with the

specification for the same reasons discussed above. Accordingly, Claims 35 and 36 are similarly deemed to be allowable.

Claims 12 -19

The rejection of Claims 12 -19 under 35 U.S.C. §102 as anticipated by U.S. Pat. No. 7,200,144 to Terrell is respectfully traversed.

Claim 12 recites:

receiving a packet formatted in accordance with a first recognized protocol; and

mapping the fields of the packet to a new packet formatted in accordance with a second protocol without buffering the packet.

First, Terrell is concerned with address virtualization, not protocol translation, and discloses mapping for virtualization of a non-virtual member or non-virtual resource to a virtual member or virtual resource (see col. 10, lines 46-52). Terrell does not disclose mapping the fields of a packet formatted according to a first protocol to a new packet formatted to a second protocol, as claimed.

Secondly, Terrell is not prior art to this application. Terrell has an effective date of October 18, 2001. This application claims priority to U.S. Provisional Application No. 60/325,704, filed September 28, 2001. The specification of this Provisional Application is virtually the same as the specification of the present application and provides support for the present claims. Therefore, this application has an earlier effective date than Terrell, and Terrell is not prior art to this application.

Thus, for both of the foregoing reasons, Terrell cannot anticipate Claims 12 -19. and these claims are also deemed allowable.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance, and early allowance of all claims is solicited.

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Respectfully Submitted,

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